

REMARKS

Claims 23-34 and 47-54 are now pending in the application. Claim 47 is new and includes the limitations of claim 27 written in independent form. Claims 48-54 are also new and include the limitations of claims 28-34, respectively. The amendments to claim 23 merely clarify subject matter that was already implicit in the claims as originally filed. As such, no new issues are raised. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 102

Claims 23-34 are rejected under 35 U.S.C. § 102(b) as being anticipated by Mufford (U.S. Pat. No.6,186,254). This rejection is respectfully traversed.

With respect to Claim 23, as best understood by Applicants, Mufford does not show, teach, or suggest the limitation of a controller of a vehicle that controls a hydrogen supply and an air supply to power a heater **to warm a fuel cell stack and a water supply while the vehicle is not running.**

For anticipation to be present under 35 U.S.C §102(b), there must be no difference between the claimed invention and the reference disclosure as viewed by one skilled in the field of the invention. Scripps Clinic & Res. Found. V. Genentech, Inc., 18 USPQ.2d 1001 (Fed. Cir. 1991). All of the limitations of the claim must be inherent or expressly disclosed and must be arranged as in the claim. Constant v. Advanced Micro-Devices, Inc., 7 USPQ.2d 1057 (Fed. Cir. 1988).

As shown in an exemplary embodiment of FIG. 3 of the present application, if the vehicle is not running (e.g., step 204) and the vehicle is in park (e.g., step 208), the controller determines whether heating is necessary (e.g., steps 220 and 238). The controller controls the hydrogen supply and the air supply to power the heater (e.g., steps 238 and 220) to warm the fuel cell stack and the water supply. In other words, the controller controls the hydrogen supply and the air supply to power the heater when the vehicle is not running. Accordingly, the heater then warms the fuel cell stack and the water supply.

As best understood by Applicants, Mufford fails to teach or suggest a controller that controls a hydrogen supply and an air supply to power a heater to warm a fuel cell stack and a water supply **when the vehicle is not running**. Instead, as best understood by Applicants, Mufford teaches controlling the application of the fuel cell stack power to a resistor to regulate temperature of a fuel cell stack **when the vehicle is running**. For example, Mufford states that:

[f]uel cell power may be advantageously used to power the resistor **soon after start-up** to bring the fuel cells tack 30 within the preferred operating temperature range and **during operation** to improve fuel cell performance by maintaining the fuel cell stack 30 within the preferred temperature range especially when the motor vehicle is operated in cool ambient temperatures.

(See column 4, lines 38-46)(emphasis added). In other words, Mufford applies fuel cell stack power to the resistor to warm the fuel cell stack while the vehicle is running.

Mufford also states that “[f]uel cell power may also be advantageously dissipated through the resistor 70 at shutdown, the resistor acting as a bleed resistor . . . and causing the stack voltage to fall so that the fuel cell stack is left in an electrically safe state.” (See column 4, lines 46-51). In other words, Mufford may also apply fuel cell

stack power to the resistor at the time that the vehicle is shutdown. Applicants note, however, that in contrast with claim 23, this power is not applied to warm the fuel cell stack and the water supply. Instead, as stated by Mufford, this power is applied to bring the fuel cell stack to an electrically safe state.

Therefore, Applicants respectfully assert that Mufford fails to show, teach, or suggest the limitation of a controller of a vehicle that controls a hydrogen supply and an air supply to power a heater **to warm a fuel cell stack and a water supply when the vehicle is not running**, as claim 23 recites.

Therefore, claim 23 is allowable for at least these reasons. Claims 24-34 ultimately depend from claim 23 and, therefore, are allowable for at least similar reasons.

Applicants note that the amendments to claim 23 merely clarify subject matter that was implicit in claim 23 as originally filed. As such, no new issues are raised.

ALLOWABLE SUBJECT MATTER


The Examiner states that claims 27, 28, 30-34 would be allowable if rewritten in independent form. Applicants thank the Examiner for the allowable subject matter. Applicants note that new claim 47 includes the limitations of claim 27 written in independent form. Additionally, claims 48-54 include the limitations of claims 28-34, respectively. Applicants respectfully assert, however, that claim 23 is in condition for allowance. Therefore, claims 27, 28, 30-34, as they ultimately depend from claim 23, should also be in condition for allowance.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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